276

Case Series of Vaccine Associated Varicella Zoster Virus Infection in Immune Compromised Patients

Pooja Khandelwal [1], Rebecca A. Marsh [1], D. Scott Schmid [2], Kay W. Radford [2], Jack Bleesing [1], Michael Jordan [1,3], Stella Davies [1], Alexandra Filipovich [1]. [1] Bone Marrow Transplantation and Immune Deficiency, Cincinnati Children's Hospital Medical Center, Cincinnati, OH; [2] Centers for Disease Control and Prevention, Atlanta, GA; [3] Immune Biology, Cincinnati Children's Hospital Medical Center, Cincinnati, OH

Case series of vaccine associated varicella zoster virus infection in immune compromised patients.

Vaccination with attenuated varicella zoster virus (VZV) can lead to infectious complications in immunodeficient patients. Here we report two immunocompromised patients who developed initial or reactivated vaccine strain varicella, leading to unique vesicular rashes involving the vaccinated limbs, without becoming wide-spread or remaining limited to a single dermatome.

Case 1- A 5 year old female presented with fever, jaundice, epistaxis and petechiae which began 2 weeks after receiving a second Varivax vaccination. Diagnostic testing revealed pancytopenia and hepatitis with a peak ALT of 1712 unit/L. A liver biopsy showed diffuse portal and lobular hepatocellular inflammation with prominent lymphohistiocytic infiltrate. A bone marrow aspirate and biopsy revealed hypocellularity and hemophagocytosis. She soon developed vesicles on her right arm and shoulder in a non-dermatomal pattern (Figure 1). The lesions remained localized to the entire right upper extremity, which was the site of the earlier Varivax vaccination. A vesicle was unroofed and the fluid tested positive for VZV by PCR. Further analysis revealed the virus to be vaccine strain varicella. She was treated with intravenous acyclovir and the lesions crusted over 21 days from presentation.

Case 2- A 17 month old female with Hurler Syndrome, on day + 6 after receiving an unrelated 7/8 Human Leukocyte Antigen matched cord blood transplant, developed a vesicular rash on her right thigh ,which was the site for Varivax vaccination 4 months prior to transplant. A lesion was unroofed and the fluid revealed VZV by PCR. Subsequent analysis revealed the virus to be vaccine strain varicella. She was started on treatment with intravenous acyclovir and intravenous immunoglobulin and her lesions crusted over within 2 weeks.

These two cases highlight unusual presentations of vaccine strain varicella in immunocompromised patients. Vaccine strain varicella can cause a vesicular rash in a non-classical distribution. It is also notable that vaccine strain virus can trigger hemophagocytic lymphohistiocytosis in immune deficient patients.

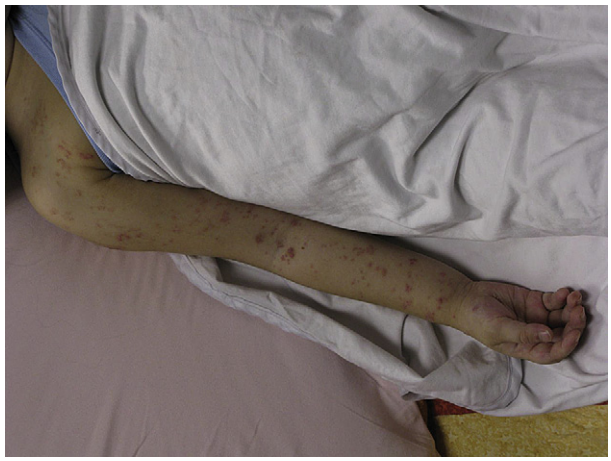

Figure 1. Entire vaccinated limb involved in a non dermatomal pattern

277

Hematopoietic Cell Transplantation (HCT) for Treatment of Genetic Lymphohematopoietic Diseases for Patients Lacking a Fully Matched Sibling Donor Using a Novel Conditioning Regimen

Sandhya Kharbanda [1], Rajni Agarwal [2], David B. Miklos [3], Matthew Porteus [4], Michael Amylon [5], Jennifer R. Willert [6], Kenneth I. Weinberg [7]. [1] Pediatric Stem Cell Transplant, Stanford University, Palo Alto, CA; [2] Pediatric Stem Cell Transplantation, Stanford University, Palo Alto, CA; [3] Division of Blood and Marrow Transplantation, Stanford University Medical Center, Stanford, CA; [4] Stanford University; [5] Dept. of Pediatrics, Stanford University Medical Center, Stanford, CA; [6] Children's Hosp San Diego, San Diego, CA; [7] Stanford University School of Medicine, Palo Alto, CA

The genetic lymphohematopoietic diseases have been effectively treated and cured by performing allogeneic HCT from a histocompatible sibling donor following a standard conditioning regimen with busulfan (BU), cyclophosphamide (CY), and antithymocyte globulin, and recently with reduced intensity conditioning (RIC) regimens. With the use of either conventional conditioning or RIC, the biggest limitation of these approaches is the lack of a fully HLA-matched sibling donor. Higher risks of graft rejection and graft-versus-host disease (GVHD) with the use of non-matched sibling donors – including unrelated donors (URD) or mismatched related donors (mMRD) makes these transplants high risk with high rates of treatment related mortality (TRM). We report preliminary results (Table 1 below) on six patients with genetic lymphohematological disorders lacking fully matched sibling donors who were transplanted using a novel

Table 1

Disease (age in years)	Stem cell donor/source, HLA match	Day of WBC engraftment	Acute/Chronic GvHD	Viral infections	Outcome (length of f/up)
WAS (2)	URD/marrow, 10/10	+26	Stage III skin/skin	None	Alive (6 yrs), off immunosuppression (IS)
Hunter Syndrome (5)	URD/marrow, 10/10	+28	None	CMV	Alive (5 yrs), off IS
Hurler Syndrome (1)	URD/marrow, 10/10	+27	Stage 1 skin/none	None	Alive (3 yrs), off IS
Sickle beta-thalassemia (24)	mMRD/marrow8/10	+17	None	CMV	Alive (3 yrs), off IS
Sickle Cell (11)	mMRD/marrow8/10	+16	Stage 1 skin, stage 1 gut/none	CMV, HHV-6, Adeno, and BK	Alive (11 mo), off IS
Sickle Cell (8)	URD/marrow, 10/10	+18	Stage1 skin/none to date	HHV-6 and Adeno	Alive (110 days), on IS